(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
15 July 2004 (15.07.2004)

PCT

(10) International Publication Number
WO 2004/059565 A1

(51) International Patent Classification[7]: G06K 7/10, G11B 7/135, G02F 1/29, 1/139, 1/1347, 1/1335, G02B 3/14, G02C 7/08

(21) International Application Number:
PCT/IB2003/006135

(22) International Filing Date:
18 December 2003 (18.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02080547.9 30 December 2002 (30.12.2002) EP

(71) Applicant *(for all designated States except US)*: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: VERSTEGEN, Emile, J., K. [NL/NL]; c/o Prof . Holstlaan 6, NL-5656 AA Eindhoven (NL). STAPERT, Hendrik, R. [NL/NL]; c/o Prof . Holstlaan 6, NL-5656 AA Eindhoven (NL).

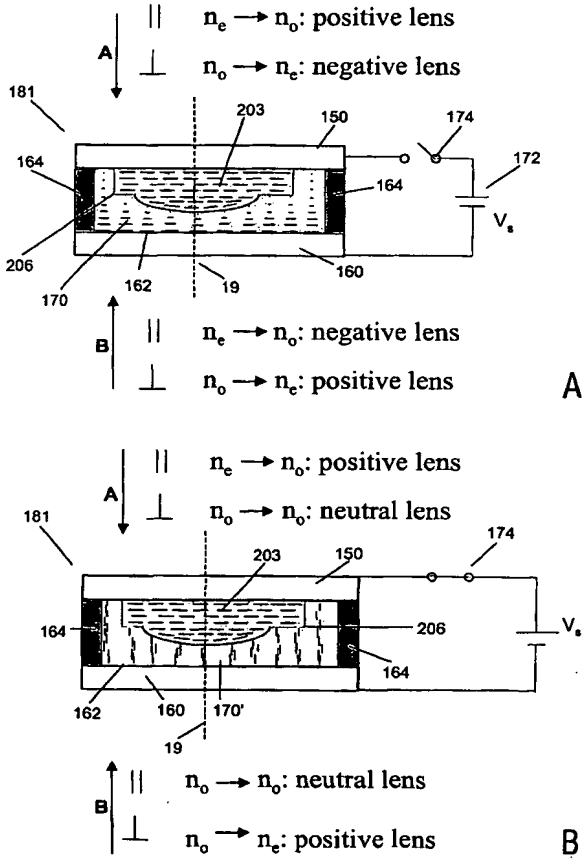
(74) Agent: DEGUELLE, Wilhelmus, H., G.; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: CONTROLLABLE TWO LAYER BIREFRINGENT OPTICAL COMPONENT



(57) Abstract: An optical component (181) comprises a first birefringent layer (203) connected to a second birefringent layer (170) by a curved interface (206). An optical axis (19) passes through the first and the second layer. The second birefringent layer (170) has molecules movable between a first orientation and a second orientation relative to the optical axis. The refractive index of the second birefringent layer (170) is dependent upon the orientation of the modules.

WO 2004/059565 A1